



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE  
BOARD OF PATENT APPEALS AND INTERFERENCES

#17  
8-25-03  
NPO

Serial No.: 09/458,858  
Assignee: NMB, U.S.A., INC.  
Title: INTEGRATED USB INPUT  
DEVICE  
Appellant: Jamin Pandana  
Filed: December 10, 1999  
Examiner: X. Wu  
Group Art Unit: 2674  
Docket No.: 861975/0089

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Commissioner for Patents  
Washington, DC 20231

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APPEAL BRIEF (UNDER 37 C.F.R. 1.192)

Appellant appeals the Examiner's final rejection dated January 28, 2002 and the non-final rejection dated February 11, 2003. Since the claims on appeal have been twice rejected, this appeal and supporting brief are appropriate. The Notice of Appeal with fee was filed June 10, 2002. Any additional Notice of Appeal is made and any additional fee is requested and should be charged to Deposit Account No. 50-0675.

I. REAL PARTY IN INTEREST

The real party in interest is the assignee NMB, U.S.A. Inc.

II. RELATED APPEALS AND INTERFERENCES

There are no known related appeals or interferences.

### III. STATUS OF CLAIMS

Claims 1-13 are under consideration. Claims 1, 2 and 6-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent no. 5,943,505 to Posner. (Previously, in the Final Rejection dated January 28, 2002, Claims 1,2 and 6-11 were rejected under 102(e) as being anticipated by U.S. Patent No. 5,943,506 to Poisner. Previously, Claims 12 and 13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Poisner.) Claims 3-5 are rejected under 103(a) as being unpatentable over Poisner in view of U.S. Patent No. 5,706,031 to Brendzel. Claims 1-2 and 6-13 also stand rejected under 35 U.S.C 103(a) as being unpatentable over Poisner in view of U.S. Patent No. 5,847,695 to Duncan, et al. Claims 3-5 are rejected under 103(a) as being unpatentable over Poisner and Duncan in view of Brendzel. The rejections of Claims 1-13 are being appealed. The Claims on Appeal appear in Exhibit A attached hereto. A copy of the Final Office Action of January 28, 2002 appears as Exhibit B attached hereto. A copy of the non-final Office Action dated February 11, 2003 appears as Exhibit C attached hereto.

### IV. STATUS OF AMENDMENTS

No amendments to the claims have been proposed since the Final Office Action of January 28, 2002, or the non-final Office Action of February 11, 2003.

### V. SUMMARY OF INVENTION

The present invention provides an input device for a computer system that has a keyboard having a function controller therein. Further, a pointing device shares the function controller. In the present invention, the Universal Serial Bus (USB) function controller is located inside the keyboard. The pointing device is thus, connected via the keyboard.

More particularly, the present invention is directed to an apparatus that satisfies the need for a cost-effective input device for use in computer systems that are designed to operate in a high bit rated USB environment. Specification page 3, lines 26-28. The first embodiment is shown in Figs. 1 and 2, and the second embodiment is shown in Figs. 3 and 4. In both preferred embodiments, the input system 100 comprises a keyboard 200 having a function controller 270 for providing output signals in the computer system in accordance with a USB technique. See Specification page 6, line 20-page 7, line 4. A pointing device 300 is coupled to the function controller 270. The keyboard and the pointing device **share the same** function controller. Specification page 4, lines 3-4. The function controller is part of and **located within the** keyboard as shown in the drawings. The pointing device is connected via the keyboard. The pointing device such as a mouse can be dumb. Specification page 6, lines 2-9.

The pointing device may be hard-wired to the function controller as shown in Figs. 1 and 2, or the pointing device may be coupled to the function controller using a wireless technique as shown in Figs. 3 and 4.

## VI. ISSUES

- A) Whether the Examiner met his burden of proof for proving that the Claims 1, 2 and 6-13 are obvious under 35 U.S.C. §103(a) in view of Poisner.
- B) Whether Claims 1, 2 and 6-13 are obvious under 35 U.S.C. §103(a) in view of Poisner.
- C) Whether the Examiner met his burden of proof for proving that the Claims 1, 2 and 6-13 are obvious under 35 U.S.C. §103(a) in view of Poisner and Duncan.
- D) Whether Claims 1, 2 and 6-13 are obvious under 35 U.S.C. §103(a) in view of Poisner and Duncan.

E) Whether Claims 3-5 were properly rejected under 35 U.S. C §103(a).

## VII. GROUPING OF CLAIMS

Claims 1, 2, 7, 8, 9, 11 and 12 will stand or fall together. Claims 3-5 will stand or fall together. Claims 6, 10 and 13 will stand or fall together.

## VIII. ARGUMENT

### A. THE BURDEN IS ON THE PATENT OFFICE TO SHOW THAT APPELLANT IS NOT ENTITLED TO A PATENT

The Patent Statute 35 U.S.C. §102 states: "A person shall be entitled to a patent unless . . ." Thus, the burden is on the Patent Office to prove that an Appellant is not entitled to a patent. According to the MPEP, the Patent Office bears the initial burden of factually supporting any conclusion of anticipation or prima facie case of obviousness.

### B. CLAIMS 1, 7 AND 12 REQUIRE THE FUNCTION CONTROLLER LOCATED WITHIN THE KEYBOARD

The Final Office Action at page 4 states: "With respect to claims 1-11, Applicant argues that the USB controller 32 of Poisner is not located within the keyboard. This argument is not persuasive because this limitation is not found in the claims." Exhibit B, paragraph 6.

Contrary to the comments in the Final Office Action, Claim 1 recites that the controller is within the keyboard by the language "a keyboard having a function controller." Further, Claim 7 recites "a first peripheral device having . . . a function controller." Additionally, Claim 12 recites "a keyboard having a function controller therein." Poisner does not disclose this feature.

The new rejection under 35 U.S.C. § 103(a) for obviousness in view of Poisner seems to acknowledge that the claims on appeal require the function controller to be located within the keyboard by stating "It would have been obvious to one of ordinary skill in the art to have integrated the keyboard controller into the keyboard. . ." Exhibit C, page 3.

Further at page 4, paragraph 5 of the non-final Office Action (Exhibit C), it is stated:

"Poisner does not clearly state that the keyboard controller is located in the keyboard."

C. THE PATENT OFFICE ACKNOWLEDGED POISNER DOES NOT  
DISCLOSE THE USB CONTROLLER LOCATED WITHIN THE KEYBOARD

In the Final Office Action, it was acknowledged by the Examiner that Poisner does not specifically disclose that the USB controller is located within the keyboard. At paragraph 5, page 3 of the Final Office Action (Exhibit B), it is stated: "Poisner does not specifically disclose [sic] that the USB controller is located within the USB keyboard."

In the non-final Office Action (Exhibit C), the Examiner states: "It is noted that Poisner does not specifically disclose that [sic] the keyboard **having** a function controller or [that] the function controller is the only controller **in said** keyboard." Page 2, paragraph 2

D. THERE IS NO SUGGESTION IN POISNER TO LOCATE THE USB  
CONTROLLER IN THE KEYBOARD

The non-final Office Action (Exhibit C) attempts to find a teaching from Poisner to locate the USB controller in the keyboard, but fails. The Office Action refers to two passages in Poisner.

First the Office Action states:

However, Poisner discloses that in one embodiment, with exception of USB keyboard 34 and USB pointing device 36, all other elements 12-30 are disposed on a motherboard (not shown), i.e. either an integral part of the motherboard, surface mounted to the motherboard, or interconnected to the motherboard, surface mounted to the motherboard, or interconnected to the motherboard through sockets or connectors (col. 3, lines 9-15). Clearly, Poisner suggests that the keyboard controller is not disposed on a motherboard or inside of the PC and it could be outside of the PC.

Exhibit C, pages 2-3.

Poisner states in this passage at column 3, line 9-15, that with the exception of the USB keyboard 34 and USB pointing device 36, all other elements 12-30 are disposed on a

motherboard. This passage in Poisner says absolutely nothing about the location of the USB controller 32. It refers to other elements.

The assumption in the Office Action that the USB controller 32 of Poisner is not located on the motherboard or at least on some other board within the PC, is without any basis. There is absolutely no disclosure as to the location of the USB controller at all and no suggestion to place it outside the PC. The Office Action seems to overlook any possibility of placing it on the motherboard or a separate board in the PC, as was actually typical prior to Applicant's invention.

The Office Action states that it would be obvious to integrate the keyboard controller into the keyboard "since Poisner suggests that the keyboard controller could be outside the PC. . . ." Exhibit C, page 3. There is no such suggestion in Poisner. Poisner is silent on the location of the USB controller 32. There is no suggestion to locate the USB controller outside the PC. Certainly there is no disclosure to locate the USB controller within the keyboard as claimed.

Second, the Office Action (Exhibit C) refers to the passage of Poisner at column 4, lines 9-15. Poisner states in full:

"Additionally, the present invention may be practiced on computer systems with some of the enumerated elements packaged/interconnected differently, without some of the enumerated elements or with other additional elements. For examples, USB controller 32 may be packaged as an integral part of PCI/ISA bus bridge 24, AT keyboard controller 30 may be emulated with additional circuitry inside PCI/ISA bridge 24, VRAM 26 may be removed, and additional circuitry for generating a SMI for other reasons may be added."

Though this is a general disclosure to package or interconnect elements differently, it falls short of a teaching to take the USB controller out of the PC or to place the USB controller in the keyboard. One of ordinary skill would read this passage as teaching to place the USB controller 32 as part of the PCI/ISA bus bridge 24. Once again, the passage of Poisner relied

upon in the rejection, fails to provide a teaching to integrate the keyboard controller into the keyboard.

Thus, the rejection of Claims 1, 2 and 6-13 as obvious in view of Poisner should be reversed.

**E. DUNCAN FAILS TO DISCLOSE A USB KEYBOARD CONTROLLER LOCATED WITHIN THE KEYBOARD**

The Duncan patent fails to eliminate the deficiencies of the Poisner patent. Duncan discloses in Fig. 4 and column 3, lines 19-30 referenced in the Office Action (Exhibit C, page 4, paragraph 5), a mouse input device with a dial pad placed on the surface of the mouse. The dial pad has keys for dialing a phone number. Motion data generated by motion sensors of the mouse is sent to serial interface 24 which may be a serial interface such as a Universal Serial Bus (USB). As explained at column 3, lines 31-41, keystroke data from the dial pad is sent to interface 26 which forwards the keystroke data to serial interface 24 which "forwards the keystroke information to the host device." (Column 3, lines 40-41.)

The dial pad of the mouse of Duncan is not a full keyboard. All mouse input devices include some keys but that does not make the mouse device a keyboard. Further, interface 24 simply forwards keystroke information and does not scan, convert the format of data or perform other functions of a functions controller as claimed. See the Specification, page 6, line 20 - page 7, line 4. Interface 26 is not disclosed as a USB device.

Duncan basically discloses an intelligent mouse as contemplated by the USB designers. In contrast, the present invention can be used with a dumb mouse. There is a keyboard with a USB function controller located in it and a separate pointing device that shares the function controller of the keyboard. Thus, an inexpensive dumb mouse can be used, which is an

advantage. The Duncan patent actually teaches away from the use of a dumb mouse and the claimed configurations to make a dumb mouse useful in a USB environment.

Thus, Duncan does not disclose a keyboard with a USB function controller. It discloses a mouse with an interface that may be USB. Further, the mouse has some keys, as all mice do. Duncan does not show that it is an alternative to place the USB keyboard controller inside a standard computer keyboard. Duncan certainly fails to disclose the desirability of placing the USB controller inside the keyboard so that a dumb mouse can be used. The basic point of the invention is not disclosed in either Poisner or Duncan.

Thus, the rejection of Claims 1-2 and 6-13, as obvious, in view of Poisner and Duncan should be reversed.

**F. THE REJECTIONS OF THE CLAIMS FOR OBVIOUSNESS FAIL TO CITE A REFERENCE FOR THE MISSING FEATURES**

With respect to the rejection of Claims 1-2 and 6-13, the Office Action (Exhibit C, page 4, paragraph 5) states: "It would have been obvious to one of ordinary skill in the art to have integrated the keyboard controller into the keyboard device because it is an alternative way to put the keyboard controller inside of the computer or inside of the keyboard."

No evidence was set forth that the USB controller of Poisner was located anywhere but in the PC. No evidence was set forth that the USB interface of Duncan was located anywhere but in a mouse. The Examiner did not provide support for a teaching that integrating the USB control in a standard computer keyboard was a known alternate. On the contrary, it was common practice to place the controller inside the PC portion of the computer. Therefore, if not specifically indicated otherwise, it was known to persons having ordinary skill in the art to place



the controller inside the PC, not the keyboard. The known existence of an intelligent mouse such as disclosed by Duncan does not change the analysis.

G. THE REJECTIONS OF CLAIMS 1, 7 AND 12 FOR OBVIOUSNESS LACK  
SUBSTANTIAL EVIDENCE SUPPORT

The Office Action cites no reference for the claimed limitation missing from Poisner (i.e. the controller located within the keyboard), but rather cites two passages in Poisner that do not suggest a USB controller in a keyboard shared by a pointing device and cites the intelligent mouse of Duncan. The Office Action simply asserts "it is an alternative way to put the keyboard controller inside of the computer or inside of the keyboard." Exhibit C, page 4, paragraph 5.

In a Notice of February 21, 2002 (copy attached as Exhibit D) regarding PTO procedures for relying on facts which are not of record as common knowledge, it is stated that "in *Zurko* [258 F.3d 1379 (Fed. Cir. 2001)] and after recent claims, the court criticized the USPTO's reliance on "basic knowledge" or "common sense" to support an obviousness rejection, where there was no evidentiary support in the record for such a finding." The Notice further states:

It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known.

\* \* \*

It is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. As the court held in *Zurko*, an assessment of basic knowledge and common sense that is not based on any evidence in the record lacks substantial evidence support.

Exhibit D, page 2.

Additionally, the Notice states:

If Appellant challenges a factual assertion as not properly officially noticed or not properly based upon common knowledge, the examiner must support the finding with adequate evidence.

If Appellant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained.

In this case it is acknowledged that Poisner does not disclose a USB function controller within a keyboard. Further, Duncan is simply a disclosure of an intelligent mouse with more keys than usual. No further reference is cited. The rejections lack substantial evidence support. Appellant respectfully submits that the independent claims are allowable and the rejection should be reversed. Appellant further maintains that documentary evidence must be provided if the rejection is maintained. Further, if the Patent Office maintains that obviousness can be established without a teaching of locating the controller in the keyboard, it is respectfully submitted that the Patent Office is propounding a new interpretation of the law of obviousness. Further, Appellant requests that a motivation to combine any newly asserted reference with Poisner or Duncan be identified and that such motivation to combine be found within the prior art. The present rejections amount to impermissible hindsight employing Applicant's disclosure as a roadmap.

H. THE PURPORTED OBVIOUSNESS REJECTIONS FAIL TO MEET  
MINIMUM MPEP REQUIREMENTS FOR A PROPER STATEMENT OF  
REJECTION

Claims 1, 2 and 6-13 are rejected for obviousness.

The MPEP sets out a form for the reasoning under which claims are to be examined for obviousness. After the difference between the claim and the prior art has been determined under the first steps of the *John Deere* analysis, the MPEP instructs how to analyze the "obviousness of

the difference” between a claim and the prior art. An overview of this analysis is stated at § 2143 (and, is repeated twice more in §§ 706.02(j) and 2142). Note that, in two short paragraphs, the MPEP reiterates five times that this form of reasoning is mandatory. This, and no other, is the form of reasoning that must be used (emphasis added):

**2143 Basic Requirements of a *Prima Facie* Case of Obviousness**

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Appellant’s disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Further requirements of these three reasoning steps are elaborated in §§2143.01-2143.03, and the permissible “Sources of Rationale” that must underlie each of the steps are set out in §§ 2144-2144.09.

The written rejections purport to identify suggestions to modify Poisner which do not exist or which amount to an “obvious to try different packaging of elements” rejection. The only cited suggestion to combine Poisner and Duncan is based upon calling a mouse with keys a keyboard and asserting that having a USB controller in a keyboard is a known alternative. That is, the written rejection fails to meet the three elements of *prima facie* obviousness.

The purported rejection states that it would have been “obvious,” but fails to make the three underlying showings required to support the assertion. Significantly, there is no proper suggestion or motivation to modify Poisner. The § 103(a) rejections are improper.

Chapter 2100 is binding on examiners and has created settled expectations for Appellants to have applications examined in accordance with predictable legal standards.

The Board is petitioned to provide “management and direction” to an examiner who has demonstrated either an inability or a willful refusal to carry out the minimum duties imposed by the MPEP. The Board is requested to supervise the Examiner to ensure that any future obviousness rejection follows the form of reasoning set out at MPEP §§ 2143-2143.03. The Examiner must make the showings set out in MPEP §§ 2143-2143.03, and must support each with evidence drawn from the “Sources of Rationale” set out in MPEP § 2144-2144.09. If the claims remain rejected, the Examiner should be instructed that his written rejection must state specific findings on each of the required elements of a *prima facie* case, at least to the degree that issues have been traversed in any of Appellant’s previous papers. Any further rejection should set out this analysis in writing so that Appellant can respond with appropriate claim amendments or arguments.

**I. THERE IS NO MOTIVATION TO COMBINE THE ELEMENTS OF POISNER (OR POISNER AND DUNCAN) WITH BRENDZEL**

Claims 3-5 are rejected based upon a combination of Poisner and Brendzel and a combination of Poisner, Duncan and Brendzel. It would not have been obvious to combine the elements of Poisner (and Duncan) with Brendzel to achieve the present invention. In fact, Brendzel is only cited for a wireless pointing device and Brendzel does not eliminate the deficiencies noted in Poisner and/or Duncan.

**J. THE DEPENDANT CLAIMS ARE ALSO PATENTABLE**

Since Claims 2-6, 8-11 and 13, depend from Claims 1, 7 and 12, they are not obvious for at least the same reasons as set forth with respect to Claims 1, 7 and 12.

K. POISNER FAILS TO DISCLOSE A "DUMB" POINTING DEVICE

Claims 6, 10 and 13 are rejected in view of Poisner on the grounds that "Poisner discloses that the pointing device is a [sic] dumb." (Exhibit C, page 3, paragraph 3.)

The Examiner made the statement that the pointing device of Poisner is "dumb" because it is controlled by the USB controller. (Exhibit B, Final Rejection, page 3, paragraph 5.)

However, the Appellant does not find support for this statement in the Poisner reference.

Without an explicit statement that the Poisner controller is located within the keyboard or other teaching to located the controller in the keyboard, rather than inside the PC as was conventional, the Patent Office has failed to meet its burden. The rejection of Claims 6, 10 and 13 lacks substantial evidence support and fails to comply with § 2143 of the MPEP as argued above. Thus, the rejections of Claims 6, 10 and 13 related to a "dumb" pointing device, should be reversed.

L. THERE IS NO PROOF THAT LOCATING THE CONTROLLER WITHIN THE KEYBOARD IS INHERENT IN POISNER

In the event that the Office Action bases the assumption that Poisner has a USB controller within the keyboard upon the theory of inherency, the proof of inherency is not met by the Office Action. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re*

*Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).


"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Here, it does not necessarily flow that the controller of Poisner is located in the keyboard. In fact, typically the controllers of prior art systems are located in the PC. The test for inherency cannot be met.

#### IX. CONCLUSION

For the foregoing reasons, it is respectfully submitted that the rejection of Claims 1-13 should be reversed.

Respectfully submitted,

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